

REMARKS:

The Summary of the Invention has been amended to be consistent with amended claim 1 and claim 52.

Claims 16-28 have been canceled because they were duplicative of claims in the group 1-15.

Claims 29-42 have been canceled because of the restriction requirement without prejudice to the applicants' right to file one or more divisional applications directed to the subject matter of claims 29-42.

Claim 10 has been canceled because some subject matter of claim 10 has been written into claims 43-45.

Claims 46-78 were added in Amendment A to better protect novel aspects of the invention.

Support for amended claim 1, claims 46-48 and claim 52 is found at least in the embodiments of the specification described in connection with Figs. 5-6 and the related text on pages 10-22, the optimization metrics described on page 34 and the text relating to inventory and shipping requirements found on pages 1, 5, 17, 18, 22-25 and 27-30.

Support for claim 2 is found at least in the embodiments of the specification described on page 25, line 7.

Support for claim 3 is found at least in the embodiments of the specification described on page 13, lines 16-19 and page 29, lines 18-20.

Support for claim 6 is found at least in the embodiments of the specification described on page 31, lines 1-4.

Support for claim 7 is found at least in the embodiments of the specification described on page 31, lines 6-9.

The remaining dependent claims in the group of claims 1-15 are believed to be sufficiently like the corresponding original claims to avoid the need for a recitation of support in the specification.

Support for claims 43-45 is found at least in the embodiments described on pages 33-34 of the specification and in original claim 10.

Support for claims 49 and 76 is found at least in the embodiments described on pages 23 and 24 of the specification.

Support for claims 50 and 77 is found at least in the embodiments described at least on page 18, lines 10-13.

Support for claims 51 and 78 is found at least in the embodiments described on page 25 of the specification.

In general, support for claims 52-78 is found in the same portions of the specification cited above in connection with claims 1-15 and 43-51.

For example, support for claim 54 is found at least in the embodiments described in the specification on page 14.

Support for claim 55 is found at least in the embodiments described in the specification on pages 29-30, including the description of the globally optimized priority value.

Support for claim 56 is found at least in the embodiments described in the specification on pages 12-13.

Support for claim 57 is found at least in the embodiments described in the specification on pages 12-13.

Support for claim 58 is found at least in the embodiments described in connection with claim 46.

Support for claims 59-60 is found at least in the embodiments described in connection with claims 12-13.

Support for claim 63 is found at least in the embodiments described in the specification on pages 11-12, including the description of managed multi-pickup.

Support for claim 71 is found at least in the embodiments described in the specification on page 19.

Support for claim 72 is found at least in the embodiments described in the specification on page 32.

Support for claim 73 is found at least in the embodiments described in the specification on page 32.

Support for claim 74 is found at least in the embodiments described in the specification on page 14.

Support for claim 75 is found at least in the embodiments described in the specification on pages 11-12.

Responding to paragraph 1 of the May 28, 2003 Office Action, the applicants thank the Examiner for acknowledging applicants' election of claims 1-28.

Responding to paragraph 2 of the May 28, 2003 Office Action, a copy of the "CDM Tests..." reference was supplied with Amendment A.

Responding to paragraphs 3-4 of the May 28, 2003 Office Action, claim 12 has been amended to cure the rejection under 345 U.S.C. 112, second paragraph.

Responding to paragraphs 5-6 of the May 28, 2003 Office Action, the rejection of claims 1-28 under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter is respectfully traversed. MPEP § 2106.IV.A (pages 2100-10 – 2100-11, 8th Ed.) states:

[A] complete definition of the scope of 35 U.S.C. 101, reflecting Congressional intent, is that any new and useful process, machine, manufacture or composition of matter under the sun that is made by man is the proper subject matter of a patent.

Claims 1-15 claim a method, which falls within the process category of patentable subject matter identified in § 101. The claimed method is useful, and the Examiner has made no rejection for lack of utility. *In re Alappat*, 31 USPQ2d 1545, 1558 (Fed. Cir. 1994) and *State Street Bank & Trust Co.. v. Signature Financial Group Inc.*, 47 USPQ2d 1596, 1601-1602 (Fed. Cir. 1998) stand for the proposition that if claimed subject matter produces a useful, concrete and tangible result, the requirements of 35 U.S.C. §101 are satisfied. (See, e.g., the 35 U.S.C. 101 Training Materials on the PTO web site.) Claim 1 claims a method of optimizing a shipment of at least one product, which is a useful, concrete and tangible result. As a result, claims 1-15 claim a process within the meaning of 35 U.S.C. §101. (Claims 16-28 have been canceled.)

Claims 51 and 78 are limited to computer implementation of the claimed method and also claims subject matter within the technological arts.

Responding to paragraphs 7-8 of the May 28, 2003 Office Action, the rejection of claims 1-4 and 16-19 under 35 U.S.C. 102(e) as being anticipated by O'Neill et al. (U.S. Patent No. 6,219,653, "O'Neill") is respectfully traversed. Claim 1 as currently amended states:

1. (Currently Amended) A method of optimizing a shipment by determining one or more maximum loads of one or more transport vehicles, the shipment being to at least a first receiver of a plurality of products maintained by the first receiver in inventory at a receiver location, the shipment being from a first ~~source~~shipper at a first location and a second ~~source~~shipper at a second location different from the first location to the first receiver through a distribution point located at a distribution location remote from the receiver location, the first location and the second location, the first and second ~~source~~shippers being different business entities, the method comprising the steps of:

determining the products required to be maintained in the inventory in response to data received from the first receiver; and

calculating an amount of the products for shipment from the first ~~source~~shipper and the second ~~source~~ ~~and a mode of transportation of the products~~ shipper by the one or more transport vehicles from the first and second ~~source~~shippers to the distribution point and from the distribution point to the first receiver that reduces logistics costs and that maintains the inventory within the amount of products required to be maintained according to an algorithm employing one or more metrics and the data.

O'Neill does not teach or suggest such a novel combination. O'Neill teaches shipping by only a single shipper from a single location. For example, Fig. 13J shows a

single shipper and a single shipping address at reference number 500. The concept of calculating an amount of products for shipment from first and second locations of shippers, which are different business entities, offers advantages over shipping from a single location of a single shipper. Some of the advantages are pointed out on pages 11-14 of the specification. O'Neill does not teach or suggest the concept of calculating an amount of products for shipment from first and second shippers, much less first and second sources that are different business entities, as claimed. Currently amended claim 1 is allowable for this reason alone.

Amended claim 1 also is limited to determining the products required to be maintained in an inventory of a first receiver in response to data received from a first receiver and to calculating an amount of products for shipment that maintains the inventory within an amount of products required to be maintained. O'Neill does not teach or suggest these concepts. Although O'Neill teaches the use of seller inventory (e.g., Col. 21, lines 8-22), the undersigned has been unable to find any teaching or suggestion by O'Neill of determining products required to be maintained in receiver inventory or of calculating an amount of products for shipment that maintains receiver inventory in any amount, much less within the amount of products required to be maintained as claimed. For all the foregoing reasons, claim 1 is allowable.

Claim 2-4 are dependent on claim 1 and are allowable for the same reasons as claim 1.

Claim 2 is limited to a metric comprising a level of inventory of a receiver. As explained in connection with claim 1, O'Neill does not teach or suggest such a concept. As a result, claim 2 is allowable.

Claim 3 is limited to a metric comprising time of shipment of the products.

Although O'Neill refers to time of delivery (Col. 27, line 17), the undersigned has been unable to find any teaching or suggestion by O'Neil related to time of shipment. As a result, claim 3 is allowable.

Claims 16-19 have been canceled.

Responding to paragraph 8 of the May 28, 2003 Office Action (second occurrence), the rejection of claims 5-9, 11-15, 21-24 and 26-28 under 35 U.S.C. 103(a) as being unpatentable over O'Neill as applied to claims above in view of Sean is respectfully traversed. Claims 5-9 and 11-15 ultimately are dependent on claim 1 and are allowable for the same reasons as claim 1. (Claims 21-24 and 26-28 have been canceled.)

Amended claim 5 is limited to bin-packing characteristics of vehicles. Sean teaches about system security and not the subject matter of claim 5. Thus, no one skilled in the field of the invention would be motivated to combine Sean with O'Neill in the manner suggested by the Examiner. The undersigned has been unable to locate any relevant portion of Sean regarding the subject matter of claim 5, and respectfully requests that the Examiner more specifically point out the language relied on from Sean. As a result, claim 5 is allowable.

Claim 6 is dependent on claim 1 and is allowable for the same reasons as claim 1.

Claim 6 reads:

6. (Previously Presented) The method of claim 1, wherein the products comprise a first product and a second product and wherein the step of calculating

comprises the step of prioritizing the first product relative to the second product to be shipped.

O'Neill does not teach or suggest this novel concept. At Col. 12, lines 10-15, O'Neill teaches specifying different product characteristics associated with a product category, not prioritizing a first product relative to a second product as claimed. As a result, claim 6 is allowable.

Claim 7 reads:

7. (Previously Presented) The method of claim 1, wherein the step of calculating comprises the step of temporally optimizing the product shipment from the first and second locations.

O'Neill does not teach or suggest this novel concept. "Temporally" means related to time. At Col. 3, lines 18-20, O'Neill teaches optimizing load capacity, which does not relate to optimizing time in any form, much less temporally optimizing product shipment from first and second locations as claimed. At Col. 27, line 17, O'Neill mentions delivery time. However, there is no teaching or suggestion of optimizing product shipment from any location, much less first and second different locations as claimed. As previously pointed out, O'Neill does not teach or suggest shipping from two different locations. As a result, claim 7 is allowable.

Regarding claims 8 and 9, the Examiner takes Official Notice that it is old and well known in the art to provide trade allowance to include discount, bonuses, incentives, inducement, etc., and that it would have been obvious to person of ordinary skill in the art to incorporate a trade allowance including a rebate, discount, incentive, inducement in O'Neill. In support of the Office Notice, the Examiner cites page 1 of

Dialog (THE MARKETERS: trade Promotion). However, a copy of the cited MARKETERS reference was not included with the Office Action. As a result, the applicants traverse the Official Notice due to the lack of the supporting reference. In addition, the applicants state that, as far as they are aware, it was not well known in the field of the invention at the time of the invention to provide a trade allowance, including a rebate. As a result, the applicants respectfully request the Examiner to provide a reference that supports the Official Notice as required by MPEP § 2141.01 (III). For the foregoing reasons, claims 8-9 are allowable.

Claims 12 and 13 are limited to labeling the products with destination indicia. Carol does not teach or suggest this novel concept. The Examiner is requested to specifically point out the language of Carol relied on to reject claims 12 and 13.

Claim 14 is limited to a predefined destination beyond the cross-dock. Carol does not appear to teach or suggest this concept. The Examiner is requested to specifically point out the language of Carol relied on to reject claim 14.

Regarding claim 15, the Examiner takes Official Notice that it is notoriously old and well known in the transportation art to utilize a vehicle tracking system, and that it would have been obvious to a person of ordinary skill in the art to include a vehicle tracking system in O'Neill in order to track the location of the transport vehicle. In support of the Official Notice, the Examiner cites col. 16, line 60 through col. 17, line 4 of Patent No. 6,088,648 (Shah). Shah is outside the field of the applicants' invention because it is directed to a method of computer aided dispatching, not a method of optimizing shipment as claimed. As a result, the applicants traverse the Official Notice because the search results show that it was not well known in the field of the invention

at the time of the invention to provide a vehicle tracking system for a method of optimizing a shipment. The applicants respectfully request the Examiner to provide a reference that supports the Official Notice as required by MPEP § 2141.01 (III).

Responding to paragraph 8 of the May 28, 2003 Office Action (third occurrence), the rejection of claims 10 and 25 under 35 U.S.C. 103(a) as being unpatentable over O'Neill as applied to claims above in view of Carol is respectfully traversed. Claims 10 and 25 have been canceled. Claims 43-45 incorporate some subject matter from claim 10.

Claims 43-51 are dependent on claim 1 and are allowable for the same reasons as claim 1.

Claim 43 also is allowable over O'Neill and Carol because it is limited to products to be shipped from first and second locations. As previously pointed out, O'Neill provides no teaching or suggestion of such a concept, and Carol does not provide any such teaching or suggestion. As a result, claim 43 is allowable.

Claim 44 also is allowable over O'Neill and Bernie because it is limited to scheduling the shipment of products from first and second locations to arrive at a cross-dock before the shipping of the products from the first and second locations. As previously pointed out, O'Neill has no teaching or suggestion of shipping from a plurality of locations, and Bernie also has no teaching or suggestion of such a concept. As a result, claim 44 is allowable.

Claim 45 also is allowable over O'Neill because it is limited to optimizing an optimization metric. O'Neill teaches at Col. 12, lines 36-38 a load parameter. However, there is no teaching or suggestion about optimizing the load parameter. From all that

appears in O'Neill, the load parameter has a constant value that is not optimized as claimed. As a result, claim 45 is allowable.

Claim 49 is limited to carrying out the steps by a third party independent of the sources and the receiver. O'Neill does not teach or suggest this novel concept. By using the claimed method, an independent third party can organize and synchronize shipments from a plurality of shippers to achieve economies not realizable by the teaching of O'Neill. As a result, claim 49 is allowable.

Claim 50 is limited to a metric comprising a maximum feasible order size and wherein the step of calculating comprises calculating the maximum feasible order size that maintains the inventory of a receiver within the amount of products required to be maintained. O'Neill and the other applied references do not teach or suggest such a concept. As a result, claim 50 is allowable.

Claims 52-78 are allowable for many of the same reasons as claims 1-15 and 43-51. In particular, nothing in O'Neill or the other applied references, taken singly or in combination, teaches or suggests the determining and calculating limitations of claim 52. In addition, O'Neill does not appear to teach or suggest shipment to a plurality of receivers. For example, in Fig. 13A, O'Neill limits shipment to a single location indicated by reference number 456.

Responding to paragraphs 1-2 of the December 2, 2003 Notice of Non-Responsive Amendment, the independent claims have been amended as suggested by the Examiner so that they relate to a method of optimizing a shipment by determining one or more maximum loads of one or more transport vehicles from a plurality of

shippers. As a result, the amended claims are drawn to the same invention as the originally-claimed invention.

In a December 16, 2003 telephone conferral with Examiner Jeanty, the undersigned was informed that Amendment A had been entered. The amendments presented in Amendment B also were discussed, with the Examiner expressing general approval of the amendments to overcome the reasons for non-responsiveness stated in the December 2, 2003 Notice.

For all the foregoing reasons, each of claims 1-9, 11-15 and 43-78 defines patentable subject matter, and early allowance is solicited.

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Respectfully submitted,



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